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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/955,457
Filing Date: September 17, 2001
Appellant(s): STAVELY ET AL.

David W. Boyd
For Appellant

EXAMINER'S ANSWER

MAILED

NOV 18 2005

Technology Center 2600

This is in response to the appeal brief filed August 17, 2005 appealing from the Office
action mailed July 15, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. However, appellant has mistakenly listed June 6, 2005 as the mailing date of the final rejection, this should be July 15, 2005.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,617,141	Nishimura et al.	4-1997
5,550,587	Miyadera	8-1996

5,563,658	Parulski et al.	10-1996
6,757,020	Kikuchi	6-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

A. Claims 1, 7, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (US Patent # 5,617,141).

In regard to claim 1, note Nishimura discloses the use of a method of simulating fill flash in a camera system comprising the steps of determining distances from the camera to objects in a scene (column 5, lines 22-27), taking a photograph of the scene (column 4, lines 60-65; although it is not explicitly stated that the photograph is taken without a flash, it is implied because nowhere in Nishimura is the use of a flash disclosed, and the distance is not determined using a flash), and selectively adjust the brightness of regions of the photograph based on the distance information (column 5, lines 33-48). Therefore, it can be seen that the Nishimura device fails to capture the image without using a flash. Official notice is taken that the concepts and advantages of taking a photograph of the scene without a flash are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to capture the image without a flash in order to capture an image in an area where the use of a flash would be inappropriate or unnecessary.

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In regard to claim 7, note Nishimura discloses the use of a camera system for simulating fill flash in a camera system comprising determining distances from the camera to objects in a scene (column 5, lines 22-27), taking a photograph of the scene (column 4, lines 60-65; although it is not explicitly stated that the photograph is taken without a flash, it is implied because nowhere in Nishimura is the use of a flash disclosed, and the distance is not determined using a flash), and selectively adjust the brightness of regions of the photograph based on the distance information (column 5, lines 33-48). Therefore, it can be seen that the Nishimura device fails to capture the image without using a flash. Official notice is taken that the concepts and advantages of using a camera without a flash to capture an image are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to capture the image without a flash in order to capture an image in an area where the use of a flash would be inappropriate or unnecessary.

In regard to claim 14, note Nishimura discloses the use of a camera for simulating fill flash in a camera system comprising determining distances from the camera to objects in a scene (column 5, lines 22-27), taking a photograph of the scene (column 4, lines 60-65; although it is not explicitly stated that the photograph is taken without a flash, it is implied because nowhere in Nishimura is the use of a flash disclosed, and the distance is not determined using a flash), and selectively adjust the brightness of regions of the photograph based on the distance information (column 5, lines 33-48). Therefore, it can be seen that the Nishimura device fails to capture the

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image without using a flash. Official notice is taken that the concepts and advantages of using a camera without a flash to capture an image are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to capture the image without a flash in order to capture an image in an area where the use of a flash would be inappropriate or unnecessary.

B. Claims 2-4, 8-11, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (US Patent # 5,617,141) in view of Parulski et al (US Patent # 5,563,658).

In regard to claim 2, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 1. Therefore, it can be seen that the Nishimura reference fails to disclose the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera and analyzing the series of photographs and corresponding focus distances. Parulski discloses the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera (column 6, lines 5-17; the camera continuously captures images until the focus is acquired) and analyzing the series of photographs and corresponding focus distances (column 6, lines 5-17; the camera is continually analyzing the images until an image is acquired in focus). Parulski teaches that the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera and analyzing the series of photographs

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and corresponding focus distances is preferred in order to decrease the amount of time it takes to focus the camera (column 2, lines 25-31). For that reason, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera, storing said photographs along with a focus distance for each photograph, and analyzing the series of photographs and corresponding focus distances as suggested by Parulski.

In regard to claim 3, note Parulski discloses the computing of the contrast in the image (column 6, lines 5-17).

In regard to claim 4, note Parulski discloses that the step of determining the distances to objects at locations in the scene further comprises locating the particular photograph in the series of photographs with the spatial contrast metric indicating that objects at that location in the scene are more nearly in focus in that particular photograph than in any other in the series of photographs (column 6, lines 5-17; the camera is continually analyzing the images until an image is acquired that is the best possible focused image by increasing or decreasing the lens focus position based on contrast the level; the photograph having the average contrast increase is more nearly in focus than other photographs in the series of photographs) and identifying the distance from the camera to objects at that location in the scene as the focus distance stored in connection with that particular photograph (column 6, lines 5-17; using the Nishimura step of identifying distances from the camera to an object along with the

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storage of the average value in Parulski one of ordinary skill in the art would be motivated to combine the two in order to identify and store the distance).

In regard to claim 8, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 7 as well as the determination of distances from the camera to an object (column 5, lines 22-27). Therefore, it can be seen that the Nishimura reference fails to disclose the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera and analyzing the series of photographs and corresponding focus distances to determine the object distances. Parulski discloses the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera (column 6, lines 5-17; the camera continuously captures images until the focus is acquired) and analyzing the series of photographs and corresponding focus distances to determine the object distances (column 6, lines 5-17; using the method of Nishimura of calculating the distance from the camera to objects and combining it with the Parulski process of analyzing images one object along with the process of analyzing images in Parulski one of ordinary skill in the art would be motivated to combine the two in order to focus the camera on the proper object). Parulski teaches that the taking of a series of photographs with the camera configured to focus on objects at various distances from the camera and analyzing the series of photographs and corresponding focus distances to determine the object distances is preferred in order to decrease the amount of time it takes to focus the camera (column 2, lines 25-31). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include the

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taking of a series of photographs with the camera configured to focus on objects at various distances from the camera, storing said photographs along with a focus distance for each photograph, and analyzing the series of photographs and corresponding focus distances to determine the object distances as suggested by Parulski.

In regard to claim 9, note the primary reference of Nishimura in view of Parulski discloses the use of a camera system which simulates fill flash by determining distances from the camera as claimed in claim 8. Therefore, it can be seen that the primary device lacks a computer separate from the camera and wherein the series of trial photographs and their focus distances are transmitted to the separate computer for analysis and the simulation of fill flash. Official notice is taken that the concepts and advantages of the transfer of image data along with additional information from a camera to an external computer for further processing is notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary device taught in Nishimura and Parulski to include the use of a computer separate from the camera, and wherein the series of trial photographs and their focus distances are transmitted to the separate computer for analysis and the simulation of fill flash in order to edit the images for printing and storage.

In regard to claim 10, note Parulski discloses the computing of the contrast in the image (column 6, lines 5-17).

In regard to claim 11, note Parulski discloses locating the particular photograph in the series of photographs with the spatial contrast metric indicating that objects at

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that location in the scene are more nearly in focus in that particular photograph than in any other in the series of photographs (column 6, lines 5-17; the camera is continually analyzing the images until an image is acquired that is the best possible focused image by increasing or decreasing the lens focus position based on contrast the level; the photograph having the average contrast increase is more nearly in focus than other photographs in the series of photographs) and identifying the distance from the camera to objects at that location in the scene as the camera focus distance stored in connection with that particular photograph (column 6, lines 5-17; using the Nishimura step of identifying distances from the camera to an object along with the storage of the average value in Parulski one of ordinary skill in the art would be motivated to combine the two in order to identify and store the distance).

In regard to claim 23, note Parulski discloses the selection of one image from a series of photographs taken in determining the distances from the camera to objects in the scene (column 6, lines 5-17; the camera continuously captures images until the focus is acquired, therefore, the selected image is the image with the maximum average contrast). Nishimura discloses that the use of the selected photograph (taken from Parulski) is used as the photograph in which the brightness of regions is selectively adjusted (column 5, lines 52-57, by using the selected image from Parulski, then Nishimura selectively adjusts the brightness of the regions in the image).

In regard to claim 24, note Parulski discloses the selection of one image from a series of photographs taken in determining the distances from the camera to objects in the scene (column 6, lines 5-17; the camera continuously captures images until the

focus is acquired, therefore, the selected image is the image with the maximum average contrast). Nishimura discloses that the use of the selected photograph (taken from Parulski) is used as the photograph in which the brightness of regions is selectively adjusted (column 5, lines 52-57, by using the selected image from Parulski, then Nishimura selectively adjusts the brightness of the regions in the image).

C. Claims 5-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (US Patent # 5,617,141) in view of Miyadera (US Patent # 5,550,587).

In regard to claim 5, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 1. Therefore, it can be seen that the Nishimura reference fails to disclose that the regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera. Miyadera discloses that the regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera (column 7, lines 61-64 and column 8, lines 3-12). Miyadera teaches that the lightening of objects that are closer is preferred so that objects at a short distance are reproduced in proper color corresponding to the long distance (column 1, lines 35-40). For that reason, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include the lightening of objects that are closer as suggested by Miyadera.

In regard to claim 6, note the primary reference of Nishimura in view of Miyadera discloses the use of a method of simulating fill flash in a camera system as claimed in claim 5. Therefore, it can be seen that the Nishimura in view of Miyadera device fails to modify the brightness of regions in the resulting photograph in accordance with the inverse square law. Official notice is taken that the concepts and advantages of brightening an image in accordance with the inverse square law are notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary device taught in Nishimura and Miyadera to include the use of brightening the image in accordance with the inverse square law in order to compensate for the degraded image quality due to the effects of the inverse square law.

In regard to claim 12, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 7. Therefore, it can be seen that the Nishimura reference fails to disclose that the regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera. Miyadera discloses that the regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera (column 7, lines 61-64 and column 8, lines 3-12). Miyadera teaches that the lightening of objects that are closer is preferred so that objects at a short distance are reproduced in proper color corresponding to the long distance (column 1, lines 35-40). For that reason, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include the lightening of objects that are closer as suggested by Miyadera.

In regard to claim 13, note the primary reference of Nishimura in view of Miyadera discloses the use of a camera system which simulates fill flash by determining distances from the camera as claimed in claim 12. Therefore, it can be seen that the Nishimura in view of Miyadera device fails to modify the brightness of regions in the resulting photograph in accordance with the inverse square law. Official notice is taken that the concepts and advantages of brightening an image in accordance with the inverse square law are notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary device taught in Nishimura and Miyadera to include the use of brightening the image in accordance with the inverse square law in order to compensate for the degraded image quality due to the effects of the inverse square law.

D. Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (US Patent # 5,617,141) in view of Kikuchi (US Patent # 6,757,020).

In regard to claim 15, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 1. Therefore, it can be seen that the Nishimura device lacks the use of varying the amount of brightness adjustment in response to a user control. Kikuchi discloses the use of varying the amount of brightness adjustment in response to a user control (column 1, lines 27-32). Kikuchi teaches that the use of a user adjustable brightness value is preferred in order to properly capture an image that is desired by the user (column 1, lines 30-37). For that

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reason, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include varying the amount of brightness adjustment in response to a user control as suggested by Kikuchi.

In regard to claim 16, note Kikuchi discloses that the user control is comprised in the camera (column 1, lines 48-54; and figure 1:64).

In regard to claim 17, note Kikuchi discloses the display of the effect of brightness adjustment on the display (column 1, lines 27-37).

In regard to claim 18, note Kikuchi discloses that the display is comprised in the camera (column 1, lines 48-54; and figure 1:44).

In regard to claim 19, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 7. Therefore, it can be seen that the Nishimura device lacks the use of varying the amount of brightness adjustment in response to a user control. Kikuchi discloses the use of varying the amount of brightness adjustment in response to a user control (column 1, lines 27-32). Kikuchi teaches that the use of a user adjustable brightness value is preferred in order to properly capture an image that is desired by the user (column 1, lines 30-37). For that reason, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include varying the amount of brightness adjustment in response to a user control as suggested by Kikuchi.

In regard to claim 20, note Kikuchi discloses that the user control is comprised in the camera (column 1, lines 48-54; and figure 1: 64/66).

In regard to claim 21, note Nishimura discloses the use of a method of simulating fill flash in a camera system as claimed in claim 7. Therefore, it can be seen that the Nishimura device lacks the use displaying the effect of brightness adjustment on the display. Kikuchi discloses the displaying the effect of brightness adjustment on the display (column 1, lines 27-37). Kikuchi teaches that the use of a user adjustable brightness value is preferred in order to properly capture an image that is desired by the user (column 1, lines 30-37). For that reason, it would have been obvious to one of ordinary skill in the art to modify the Nishimura device to include displaying the effect of brightness adjustment on the display as suggested by Kikuchi.

In regard to claim 22, note Kikuchi discloses that the display is comprised in the camera (column 1, lines 48-54; and figure 1:44).

(10) Response to Argument

A. With respect to claims 1, 7 and 14, Appellant argues that Nishimura et al. fails to meet the limitations of the claims. Specifically that Nishimura does not teach “selectively adjusting the brightness of regions of the photograph based on the distance information.” The examiner disagrees, the Nishimura reference does selectively adjust the brightness of regions of the photograph. Since the regions are not specifically defined in claims 1, 7 and 14, the examiner is interpreting this limitation to mean that the brightness is selectively adjusted based on distance information, and that the regions include the entire image. Therefore, in the Nishimura reference, the brightness of the “regions” (i.e. the entire image) is adjusted based on the distance information (column 5, lines 33-48).

Applicant also argues that Nishimura uses a different “detection characteristic” to set exposure depending on scene “ambience”. However, points out that the “ambience” is calculated by using object distance and object illumination (column 5, lines 33-47; and figure 4). Therefore, Nishimura meets the limitations of the claim because the image is adjusted based on the “region” selected (this region is not to be confused with an area of the image, but rather preset threshold levels of distance and illumination), and by using distance and illumination levels the correct exposure is selected.

Applicant also argues that different regions of the photograph are not affected selectively by Nishimura. However, the examiner is interpreting the limitation of “selectively adjusting the brightness of regions of the photograph based on the distance information” to mean that the brightness is selectively adjusted based on distance information, and that the regions include the entire image. Therefore, in the Nishimura reference, the brightness of the “regions” (i.e. the entire image) is adjusted based on the distance information (column 5, lines 33-48).

Applicant also argues that the “regions” depicted in Figure 4 are not regions of a photograph. The examiner agrees, Figure 4 has not been relied on as regions of an image, but does teach that the image is adjusted based on the “region” selected (this region is not to be confused with an area of the image, but rather preset threshold levels of distance and illumination), and by using distance and illumination levels the correct exposure is selected.

Applicant also argues that Figure 4 is not a map of a scene or photograph. The examiner agrees, Figure 4 has not been relied on as a map of a scene or photograph,

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but does teach that the image is adjusted based on the "region" selected (this region is not to be confused with an area of the image, but rather preset threshold levels of distance and illumination), and by using distance and illumination levels the correct exposure is selected.

Applicant also argues, that in Figure 4, a location in the "map" does not correspond to a particular location in a scene. The examiner agrees, Figure 4 has not been relied on as a map of a scene or photograph, but does teach that the image is adjusted based on the "region" selected (this region is not to be confused with an area of the image, but rather preset threshold levels of distance and illumination), and by using distance and illumination levels the correct exposure is selected.

B. Appellant argues that Nishimura and Parulski do not teach or suggest all of the limitations of Appellant's claims 2-4 and 23 as discussed with claims 1, 7 and 14. The examiner disagrees for the same reason as set forth above for claims 1, 7 and 14.

C. Appellant argues that Nishimura and Parulski do not teach or suggest all of the limitations of Appellant's claims 8-11 and 24 as discussed with claims 1, 7 and 14. The examiner disagrees for the same reason as set forth above for claims 1, 7 and 14.

D. Appellant argues that Miyadera does not disclose, "adjusting the brightness of regions" because Miyadera is trying to preserve the brightness because the weightings of the gains "sum to unity", and that Miyadera is performing white balance under flash

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illumination. However, the examiner disagrees, the examiner points out that Miyadera does not disclose anything about preserving the brightness of the image, but rather that the color temperature is adjusted, although the weighting of the gains may sum to unity, the overall color temperature is adjusted (e.g. the red signal may be adjusted more than the other blue signal, which would change the color temperature). Therefore, the examiner is interpreting the adjustment of the color temperature as the equivalent of lightening or darkening the image (the lower the temperature, the darker the image, and the higher the temperature, the lighter the image). Miyadera discloses that the regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera (column 7, lines 61-64 and column 8, lines 3-12). And as for Miyadera performing white balance under flash illumination, the examiner points out that the white balance can be performed without using the flash (column 5, lines 44-50).

Applicant also argues that Miyadera teaches away from applicant's method, and that the combination of Miyadera with other art in establishing obviousness is improper. The examiner disagrees, because Miyadera teaches the use of distance measurement to adjust an image.

E. Applicant argues, with respect to claim 5, that "white balance adjustment is not the same as lightening regions in a photograph", and that "Miyadera endeavours to preserve brightness, not adjust it, and therefore does not describe a method in which regions containing objects closer to the camera are lightened in the resulting

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photograph in relation to regions containing objects farther from the camera.” However, the examiner disagrees, the examiner points out that Miyadera does not disclose anything about preserving the brightness of the image, but rather that the color temperature is adjusted, although the weighting of the gains may sum to unity, the overall color temperature is adjusted (e.g. the red signal may be adjusted more than the other blue signal, which would change the color temperature). Therefore, the examiner is interpreting the adjustment of the color temperature as the equivalent of lightening or darkening the image (the lower the temperature, the darker the image, and the higher the temperature, the lighter the image). Miyadera discloses that the regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera (column 7, lines 61-64 and column 8, lines 3-12).

F. Appellant argues that Nishimura and Miyadera do not teach or suggest all of the limitations of Appellant’s claims 5-6 as discussed with claim 1. The examiner disagrees for the same reason as set forth above for claim 1.

G. Appellant argues that Nishimura and Miyadera do not teach or suggest all of the limitations of Appellant’s claims 11-12 as discussed with claim 7. The examiner disagrees for the same reason as set forth above for claim 7.

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H. Appellant argues that Nishimura and Kikuchi do not teach or suggest all of the limitations of Appellant's claims 15-18 as discussed with claim 1. The examiner disagrees for the same reason as set forth above for claim 1.

I. Appellant argues that Nishimura and Kikuchi do not teach or suggest all of the limitations of Appellant's claims 19-22 as discussed with claim 7. The examiner disagrees for the same reason as set forth above for claim 7.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Chriss S. Yoder III
Assistant Examiner
Art Unit 2612



Conferees:

Ngoc-Yen Vu, SPE
David Ometz, SPE

